

Amendments to the Claims:

Please amend claims 1, 3, 6, 8, 10 to 13, 16, 18 and 19, add new claims 20 to 24, and cancel claims 2, 4, 5, 14, 15 and 17 without prejudice or disclaimer of the subject matter contained therein. The claim listing below replaces all prior versions of the claims in the application.

Listing of Claims:

1. (Currently Amended) An engine exhaust emission control device comprising:
an addition device configured to add for adding a NOx reducing agent to exhaust gas of an engine;
a first controller configured to control ~~be in association with~~ the addition device and to detect a first abnormality in the addition device; and
a second controller configured to set ~~be in association with the engine, for setting~~ an engine control factor that influences the composition of exhaust gas at the point in time of emission from a cylinder ~~of the engine, to output a command signal that corresponds to the set engine control factor, and to detect a second abnormality in an exhaust gas recirculation device or a supercharger arranged in the engine as an engine part for realizing the engine control factor,~~
wherein
the second abnormality occurs when a detected voltage of the command signal output to the exhaust gas recirculation device is greater than a predetermined value, or when a detected pressure of intake air compressed by the supercharger deviates from a predetermined range,
the first controller detects an abnormality that occurs in the addition device as a first abnormality, and at the time of a first abnormality occurrence when the occurrence of this if the first abnormality is detected, the first controller outputs to the second controller, an engine control signal for making a NOx emission amount of the engine vary from that at normal engine operation times, other than at the time of the first abnormality occurrence, under the same operating conditions of the engine, and
if the second abnormality is detected, the second controller outputs to the first controller, an addition device control signal for making a reducing agent addition amount added by the addition device vary from that at normal addition control times, other than at the time of the second abnormality occurrence.

2. (Cancelled)

3. (Currently Amended) An engine exhaust emission control device according to claim 20 [[2]], wherein the first controller receives the addition device control signal and reduces the reducing agent addition amount corresponding to a reduction in the NOx emission amount related to the second abnormality, and increases the reducing agent addition amount corresponding to an increase in the NOx emission amount related to the second abnormality.

4 and 5. (Cancelled)

6. (Currently Amended) An engine exhaust emission control device according to claim 1, wherein the first controller outputs an engine control signal for reducing the NOx emission amount of the engine to less than at normal engine operation times, at the time of the first abnormality occurrence.

7. (Original) An engine exhaust emission control device according to claim 6, wherein the first controller stops addition of the reducing agent by the addition device, along with outputting of the engine control signal.

8. (Currently Amended) An engine exhaust emission control device according to claim 1, wherein the addition device comprises[;]:

a tank configured to store ~~for storing~~ an aqueous solution of the NOx reducing agent or a precursor thereof, and

an injection nozzle disposed on an exhaust passage of the engine, the injection nozzle configured to inject ~~injecting~~ the reducing agent or precursor aqueous solution stored in the tank, to add the NOx reducing agent to the exhaust gas.

9. (Original) An engine exhaust emission control device according to claim 8, wherein urea water is stored in the tank.

10. (Currently Amended) An engine exhaust emission control device according to claim 8 ~~[[1]]~~, further comprising a first sensor configured to detect ~~for detecting~~ a concentration of the reducing agent or a precursor contained in the reducing agent or precursor aqueous solution stored in the tank, and

the first controller detects as the first abnormality, a situation where a value of the concentration detected by the first sensor deviates from a predetermined range.

11. (Currently Amended) An engine exhaust emission control device according to claim 8, further comprising a second sensor configured to detect ~~for detecting~~ a residual amount of the reducing agent or precursor aqueous solution stored in the tank, and

the first controller detects as the first abnormality, a situation where a value of the residual amount detected by the second sensor is less than a predetermined value.

12. (Currently Amended) An engine exhaust emission control device comprising:
an addition device configured to add ~~for adding~~ a NO_x reducing agent to exhaust gas of an engine;

a first controller configured to control ~~for controlling~~ the addition device; and

a second controller configured to set an engine control factor that influences the composition of exhaust gas at the point in time of emission from a cylinder of the engine, and output a command signal that corresponds to the set engine control factor ~~be in association with the engine~~, wherein

the second controller is further configured to detect ~~detects~~ an abnormality that occurs in an exhaust gas recirculation device or a supercharger arranged in the engine as an engine part for realizing the engine control factor, that influences the composition of exhaust gas at the point in time of emission from a cylinder, and at the time of an abnormality occurrence when the occurrence of this ~~if the~~ abnormality is detected, outputs to the first controller, an addition device control signal for making a reducing agent addition amount by the addition device vary from that at normal addition control times, other than at the time of the abnormality occurrence, and

the abnormality occurs when a detected voltage of the command signal output to the exhaust gas recirculation device is greater than a predetermined value, or when a detected value of intake air compressed by the supercharger deviates from a predetermined pressure range.

13. (Currently Amended) An engine exhaust emission control device according to claim 21 ~~[[12]]~~, wherein the first controller receives the addition device control signal and reduces the reducing agent addition amount corresponding to a reduction in the NOx emission amount related to the abnormality, and increases the reducing agent addition amount corresponding to an increase in the NOx emission amount related to the abnormality.

14 and 15. (Cancelled)

16. (Currently Amended) An engine exhaust emission control device according to ~~either one of claim 1 and claim 12~~, wherein the NOx reducing agent is ammonia.

17. (Cancelled)

18. (Currently Amended) An engine exhaust emission control method, comprising the steps of:

providing ~~a reducing agent~~ an addition device to add ~~for adding~~ a NOx reducing agent to exhaust gas of an engine,

setting an engine control factor that influences the composition of exhaust gas at the point in time of emission from a cylinder of the engine,

outputting a command signal that corresponds to the set engine control factor to an engine part for realizing the engine control factor,

~~and promoting reduction of NOx using the added reducing agent, and~~

detecting an abnormality that occurs ~~occurring in an exhaust gas recirculation device or a supercharger as the engine part that influences the composition of exhaust gas at the point in time of emission from a cylinder, and at the time of a second abnormality occurrence when the occurrence of this abnormality is detected,~~

increasing or decreasing a reducing agent addition amount by the reducing agent addition device than that at normal addition control times, other than at the time of the second abnormality occurrence when the occurrence of this abnormality is detected, corresponding to modes of the abnormality, wherein

the detection step includes:

detecting a voltage of the command signal output to the exhaust gas recirculation device,

detecting a pressure of intake air compressed by the supercharger, and

detecting the occurrence of the abnormality when the detected voltage is greater than a predetermined value or the detected pressure deviates from a predetermined range abnormalities.

19. (Currently Amended) An engine exhaust emission control method, comprising the steps of:

providing a reducing agent ~~an~~ addition device to add ~~for adding~~ a NOx reducing agent to exhaust gas of an engine[.]; and

at normal times, adding the reducing agent in an amount corresponding to operating conditions of the engine by the reducing agent addition device, setting an engine control factor that influences the composition of exhaust gas at the point in time of emission from a cylinder of the engine, and outputting a command signal that corresponds to the set engine control factor to an engine part for realizing the engine control factor;

detecting a first abnormality in the reducing agent addition device;

detecting a second abnormality in an exhaust gas recirculation device or a supercharger arranged in the engine as the engine part; and

~~at the time of the occurrence of if the [[a]] first abnormality is detected, where an abnormality has occurred in the addition device,~~ manipulating ~~the~~ an engine control factor that influences the composition of exhaust gas at the point in time of emission from a cylinder, to reduce a NOx emission amount of the engine from that at normal times[.]; and

~~at the time of the occurrence of if the [[a]] second abnormality is detected, where an abnormality has occurred in an engine part for realizing the engine control factor,~~ increasing or decreasing the reducing agent addition amount ~~added~~ by the reducing agent addition device from than that ~~added~~ at normal times, corresponding to modes of the second abnormality, ~~wherein abnormalities~~

detecting the second abnormality includes:

detecting a voltage of the command signal output to the exhaust gas recirculation device,
detecting a pressure of intake air compressed by the supercharger, and
detecting the occurrence of the abnormality when the detected voltage is greater than a predetermined value or the detected pressure deviates from a predetermined range.

20. (New) An engine exhaust emission control device according to claim 1, wherein the second abnormality occurs in a fuel injector that supplies the engine with fuel or a fuel pump that supplies fuel to the fuel injector.

21. (New) An engine exhaust emission control device according to claim 12, wherein the second abnormality occurs in a fuel injector that supplies the engine with fuel or a fuel pump that supplies fuel to the fuel injector.

22. (New) An engine exhaust emission control device according to claim 12, wherein the addition device comprises:

a tank configured to store an aqueous solution of the NO_x reducing agent or a precursor thereof; and

an injection nozzle disposed on an exhaust passage of the engine, the injection nozzle injecting the reducing agent or precursor aqueous solution stored in the tank, to add the NO_x reducing agent to the exhaust gas.

23. (New) An engine exhaust emission control device according to claim 22, wherein urea water is stored in the tank.

24. (New) An engine exhaust emission control device according to claim 12, wherein the NO_x reducing agent is ammonia.